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Exploring the extent to which Universities in Ghana Deploy Knowledge Management Processes in their Activities

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Abstract

Universities are knowledge-based organisations. They are using knowledge as a key resource and for competitive advantage. Knowledge management practices seems to be suitable for universities because they possess the conducive environment and systems. This study sought to assess the extent to which KM was practiced at the universities and the mechanisms and initiatives implemented to promote KM processes at the universities. The study adopted the survey and mixed method research approach to collect data from 118 respondents from three universities in Ghana (public, private and professional). Questionnaires (consisting of blend of closed and open-ended questions) were used to collect primary data. The study established that despite the high presence of knowledge management processes (acquisition, creation, sharing and retention) at the universities, the practice was more effective at the private university than the professional and public universities respectively. These KM processes improved efficiency, effectiveness, decision-making capabilities. However, the absence of trust, openness and collaboration; difficult access to technology; and lack of support and mechanisms to promote informal discussions between staff and management of the universities negatively affected KM processes.

Keywords: Knowledge, Knowledge Management, Knowledge Management Process, Knowledge Acquisition, Knowledge Sharing, Knowledge Repositories**.**

1. Introduction

Knowledge is regarded as a strategic asset and a source of competitive advantage for universities. It is key for decision-making and strategy building. The effective exploitation of which determines success for universities. Universities that are able to identify, create, disseminate and effectively manage their knowledge are likely to be more successful than those that do not. Jain (2007) points out that some universities are unable to effectively function as knowledge-based organisations, because they lack the systems and structures that will enable them to function as such. It is, therefore, important for universities to have a clear understanding of what knowledge and its management mean to its operations. They need to consider and understand their specific functions and roles, as well as the knowledge management (KM) practices that enhance efficiency and lend value to organisational knowledge.

Universities provide intangible products/items (products with no physical form). Universities usually operate in a knowledge-based environment. The practice of KM in universities exists in two major forms. These are organisational knowledge and academic knowledge (Coukos-Semmel, 2003). Organisational knowledge refers to knowledge of the overall setup of the university: its strengths and weaknesses, the markets it serves and the factors critical to the university's success. Academic knowledge is viewed as the measurable properties of individuals, referring to academic achievement, tests and the body of knowledge resulting from combined academic inquiry in academia and the communities of scholars engaged in research (Hughes, 1999). It enables people within universities to develop a set of practices to collect and acquire knowledge and to share what they know, leading to action, which improves services and

outcomes. Academic knowledge is the primary purpose of universities (Mikulecká & Mikulecký, 2000:2).

The university environment naturally seems to be suitable for the application of KM principles because:

- They generally possess modern infrastructure for information and KM,
- Knowledge generation, acquisition, sharing and usage are natural desire for their members,
- There is usually conducive and trustful atmosphere at universities to the extent that members are neither hesitating nor afraid of sharing publishing their knowledge.

A promising direction regarding the application of KM in universities is the implementation of systems for effective KM processes. As a result, universities are able to gather relevant data and construct it in a manner that informs them on how to achieve their goals and objectives. The process begins with data collection, processing, storage, preservation, retrieval and dissemination. This helps universities to structure and organise relevant knowledge for effective decision-making in a way that would position them positively for a competitive advantage. Optimistically, it will assist universities to formulate and implement a KM initiative that would see them achieve better knowledge creation and sharing

In addition, KM processes in universities is done to improve the efficiency and effectiveness of administrative and academic activities. Specifically, these help universities to:

- focus on and protect their human and intellectual capital
- re-orientate their culture by opting for an optimal knowledge-sharing strategy
- improve decision-making through facilitated access to expertise and leading practices
- increase efficiency and productivity by reducing cases of "reinventing the wheel"
- create links between people and improve innovation through wider and borderless collaboration
- reduce loss of know-how by capturing explicit and tacit knowledge
- increase client satisfaction by delivering value insights
- enhance quality and ability to collaborate by standardising ways of working and enabling discussions with leading experts (Mikulecký & Lodhi, 2000)

There have been several studies on KM practices and processes in organisations (Anduvare, 2015; Chaudhary, 2005; Chigada, 2014; Coukos-Semmel, 2003; Feliciano, 2007). Similarly, there has been some studies on KM processes in universities globally (Mikulecký & Lodhi, 2000; Mikulecká and Mikulecký, 2000; Coukos-Semmel, 2003; Uden, 2014; Abiola, 2015; Wamundila and Ngulube, 2011; Anduvare, 2015). However, the researcher is yet to find any study on KM processes in Ghanaian universities. This study therefore sought to assess the extent to which KM was practiced at the universities and the mechanisms and initiatives implemented to promote KM processes at the universities.

2. Knowledge Management

Knowledge is used interchangeably in practice as well as in literature, with intangible assets, capabilities, core competence or even skills (Chaudhary, 2005). Davenport and Prusak (1998) define knowledge as a fluid mix of framed experience, values, contextual information and expert

insight that provide a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers.

Very early in the KM movement, Davenport (1994) offered the still widely quoted definition for KM: the process of capturing, processing, sharing and effectively using knowledge. This definition has the virtue of being simple, stark and to the point. Davenport and Prusak (1998) also express that KM is concerned with the exploitation and development of the knowledge assets of an organisation with a view to furthering the organisation's objectives. Management entails all of those processes associated with the identification, sharing and creation of knowledge. This requires systems for the creation and maintenance of knowledge repositories and to cultivate and facilitate the sharing of knowledge. It is also seen as a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving and sharing all of an organisation's information assets (Deloitte and Touch, 2000) and these assets may include people, databases, documents, policies, procedures and previously uncaptured expertise and experience in individual workers (Kundu, 2013).

Ramohlale (2014) asserts that the ultimate aim of KM is to organise, share and put together knowledge to create substance and value in knowledge, retain key talent, improve customer service, boost innovation, achieve business objectives faster and better and promote the development of unique market offerings. This is achieved through an integrated set of initiatives, systems and behavioural interventions to promote smooth flow and sharing of knowledge relevant to the business and to eliminate reinvention (Arun, 2005).

3. **Knowledge Management Processes**

KM processes can be define as the means by which individuals, teams and organisational sub-systems interact, acquire, create, store, share, retain and effectively use knowledge (Sanchez & Palacios, 2008) for an organisation's competitive edge (Zaim, 2006). King (2009:4) indicate that its goal is to leverage and improve the organisation's knowledge assets to effectuate better knowledge practices, improved organisational behaviours, better decisions and improved organisational performance. Singh (2007:177–178) and King (2009:4) further state that, although individuals in the organisation can, undoubtedly, personally perform each of the KM processes, KM is generally an organisational activity that emphasises what managers and information professionals can do to enable KM's goals to be achieved, how they can motivate individuals to participate in achieving them and how they can create social processes that will facilitate KM success.

3.1 Knowledge Acquisition

Feliciano (2007) describes knowledge acquisition as the process of extracting knowledge from experts and structuring this knowledge in a readable form. It involves the development and obtaining insights, skills and relationships either from internal or from external sources (Frost 2015). The external sources include attending conferences; hiring consultants and new staff; monitoring economic, social and technological trends; collecting data from customers and competitors; forming joint ventures and collaboration with business partners and other organisations. At the same time, organisations acquire knowledge internally by tapping into the knowledge of its staff, learning from experiences and implementing continuous process improvements (Nemani, 2010). Nemani (2010) further expresses that knowledge acquisition has

three main roles: to codify explicit knowledge; convert tacit knowledge into an explicit form and codify it; and to acquire tacit knowledge as explicit meta-knowledge (knowledge about knowledge).

3.2 **Knowledge Creation**

The ability to create new knowledge is often at the heart of organisations competitive advantage (Frost, 2014). Knowledge creation according to the Nonaka (1999) is about the continuous transfer, combination and conversion of the different types of knowledge (tacit and explicit), as users practice, interact and learn. Nonaka (1999) introduced a model known as the SECI model to explain knowledge creation. Nonaka's SECI model introduced four patterns of knowledge creation in an organisation: socialisation (tacit knowledge created from tacit knowledge), externalisation (explicit knowledge created from tacit knowledge), combination (explicit knowledge created from explicit knowledge) and internalisation (tacit knowledge created from explicit knowledge). The SECI KM model shows that knowledge can be transferred from one individual to another and from an individual to databases (repository) through knowledge conversion. Therefore, this retains knowledge in the organisation and prevents loss of knowledge by sharing it with colleagues

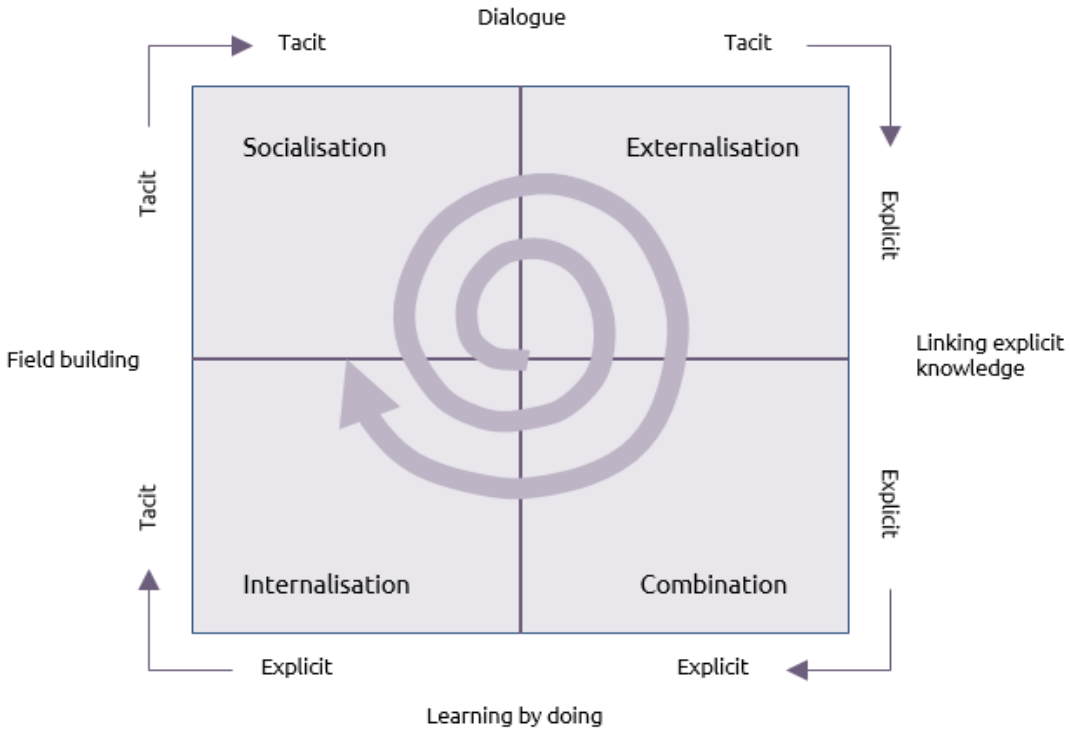


Figure 1: The SECI KM model
Source: Nonaka& Takeuchi, 1999:72

3.2.1 **Socialisation: Tacit-to-Tacit**

Socialisation is a tacit-to-tacit knowledge experience (Frost, 2014) whereby knowledge transfer and sharing take place by means of face-to-face meetings or through experiences (Gourlay, 2006). According to Nold (2009) and Frost (2014), socialisation defines a setting where individuals or groups of individuals in an organisation share personal experiences, values and

beliefs, perspectives and know-how through direct interaction. During socialisation, individuals share experiences, thereby creating tacit knowledge such as mental models and technical skills. From a university perspective, group interactions, lectures, workshops, seminars, meetings and conferences are common platforms where tacit knowledge, experience, skills, know-how and so on are shared among members. The employees within the universities keep sharing their experiences and skills, mental models, beliefs and perspectives on a regular basis (Anduvare, 2015).

3.2.2 Externalisation: Tacit to Explicit

According to Nonaka and Takeuchi (2000:10), externalisation is the publishing and articulation of tacit knowledge into explicit concepts. It describes a process whereby tacit knowledge of an individual is converted into a concept or form that is capable of being transmitted (Nold, 2009; Frost, 2014). Externalising knowledge in the university could include teaching, publications (journals, textbooks, conference papers, etc.), and presentation. This ensures that tacit knowledge is codified into explicit knowledge to be easily shareable with other staff (teaching and non-teaching) and in this way, students allow knowledge to remain in the university even if the experienced person leaves (retire or resign) the university (Anduvare, 2015).

3.2.3 Combination: Explicit to Explicit

This involves the combination (organising) of different types of explicit knowledge (Gourlay, 2003; Dalkir, 2011:68). According to Nold (2009) and Jain (2011), combination describes the process whereby individuals or groups share knowledge with others outside the immediate domain of personal contact through some common media. Nonaka and Takeuchi (1995:67) state that the use of telecommunication systems and databases can support this mode of knowledge conversion. In the university environment, Mikulecká & Mikulecký (2000) states that explicit knowledge is gathered (either inside or outside) from systems and databases in the universities. This is then edited or processed to form new knowledge. The new explicit knowledge is then disseminated among the members of the universities.

3.2.4 Internalisation: Explicit to Tacit

Gourlay (2003) and Dalkir (2011:68) opine that internalisation is the process of continuous individual and group reflection and the ability to see connections and recognise patterns and the capacity to make sense between fields, ideas and concepts. This is knowledge received and applied by individuals or groups (Gourlay, 2003). It embodies converting explicit knowledge into tacit knowledge. According to Nonaka and Takeuchi (1995) experiences acquired through socialisation, externalisation and combination can become valuable assets once they are internalised into the individuals' tacit knowledge bases through shared mental models or technical know-how.

3.3 Knowledge Retention

According to Kirsch (2008), knowledge retention is the act of focusing on the critical knowledge that is at risk of being lost, prioritising what is at risk based on potential knowledge gaps and their impact upon overall organisational performance and then developing actionable plans to retain that knowledge. The most effective approach to retain intangible assets or experts knowledge in universities is by implementing strategies such as education, training, communities of practice and use of advanced technology to capture work processes (Wamundila & Ngulube,

2011), mentoring and apprenticeship, storytelling and leveraging retirees (Chigada, 2014:58–59; Frost, 2014). Other strategies include support of formal and informal knowledge networks (social areas, social media, meetings, company functions, knowledge fairs, expertise locator, etc.), changing the organisation culture (Frost, 2014); cross-functional project teams; after-action reviews; job shadowing; exit interviews; job rotation; company procedures/processes manuals and succession planning (Lahaie, 2005; Liebowitz, 2011).

However, some organisations have a broader view of knowledge retention by focusing on the relationship with employees and management. This view does not separate organisational knowledge from employees; rather it recognises that organisational knowledge is most valuable when all employees possess it, share it and use it together to further business objectives (Frost, 2014). As long as employees stay in employment at the universities, they continue to play a competitive role through effective decision-making, communication and contribution. In the absence of knowledge-retention strategies, organisations lose tacit knowledge when employees leave for other organisations and due to other forms of attrition.

3.4 Knowledge Sharing

The operational objective of KM is to ensure that the right knowledge is available to the right person(s) at the right time for performing their knowledge activities (Ramohlale, 2014). Knowledge sharing ensures that every unit (person/organisation) is affected by the experience of another and is manifested through changes in the knowledge or performance of the recipient units and can be demonstrated by measuring changes in performance (Argote & Ingram, 2000) and enabling the exploitation and application of existing knowledge for the organisation's purposes (Kumar & Ganesh, 2009). Knowledge sharing enables organisations to re-create a complex, causally ambiguous set of routines and knowledge in new settings, keep it functioning and facilitate learning (Frost, 2014). In universities, learning involves the transfer and sharing of knowledge among different units or departments (Anduvare, 2015). Such knowledge transfer occurs in a mutual social context in which different units are interconnected to one another. Knowledge transfer among the units of organisation provides opportunities for mutual learning and inter-unit cooperation that stimulate the creation of new knowledge and, at the same time, contribute to organisational units' ability to innovate (Argote & Ingram, 2000).

4. Methodology

This study adopted the mixed method approach (qualitative and quantitative). The use of mixed research for this study is justified by Cooper and Schindler (2011) as it increases the perceived quality of the research, especially when the qualitative study follows the quantitative and provides a validation for the findings. Again, the researcher made use of the survey research since the study involved a large and geographically dispersed population. The general population for this study comprised all the categories of the universities in Ghana: public, private and professional universities. Out of these, the researcher purposively selected one university from each category to represent the specific population for this study. From each university, the researcher used the stratified sampling technique to divide the population into two strata, which consisted of faculty members (strata 1) and senior administrative staff (strata 2). A total sample size of 147 (representing 11% of the population) participants was used in this study.

Data was collected from both primary and secondary sources. Primary data was collected with

the use of questionnaires (consisting of both closed and open-ended questions). Secondary data was collected from libraries, websites, databases and journals. Data analysis went through two main stages. The first stage was the data preparation which involved organising, piling up, typing field-notes and recordings, and sorting the data. The second component was the analysis itself where the researcher analysed the data by coding the refined (prepared) data and made it ready for analysis. The SPSS was employed at this stage of the analysis.

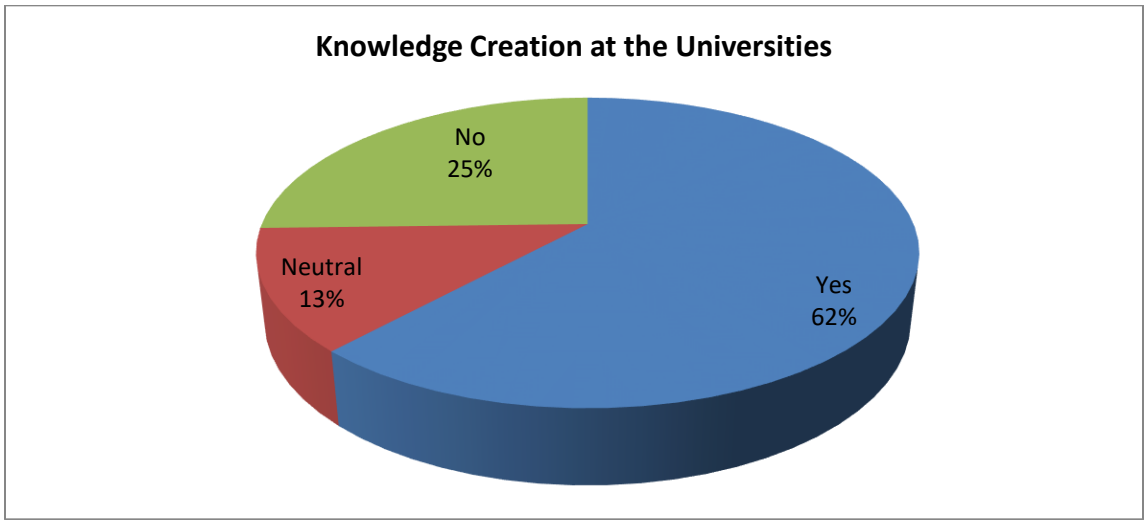
5. Presentation of Findings

5.1 Knowledge Management Processes

The main objective of the study was to assess the KM processes (creation, capturing, storage, accessing and dissemination) at the universities.

5.2 Knowledge Creation

One of the significant goals of universities is knowledge creation. The respondents were asked to indicate whether they contribute to the creation of knowledge at the universities. The results show that 62% agreed that they contribute to knowledge creation at the universities while 25% respondents were neutral and 13% disagreed as shown the the chart below



These results suggest that most of the staff (61.86%) contributed to knowledge creation at the universities. Knowledge creation is a self-evident function of a university and it is only after knowledge creation that knowledge can be reproduced through education and training. This result is positive as Ngulube & Lwoga (2007) and Jelenic (2011) state that the creation of new knowledge and effectively exploiting the existing knowledge, is an important process in KM.

The results further indicate that staff's contribution to knowledge at the private university was 72.22% while the public and professional universities were 60.27% and 59.26% respectively. The implication in this case may be that, since many of the tasks by staff in an academic institution involve knowledge creation, the involvement of the staff in the knowledge creation process would promote KM. This result is in sharp contrast to the research findings of Anduvare

(2015), which state that only 39% of the academic staff claimed to have contributed to knowledge creation at Marist International University College (MIUC), Nairobi-Kenya.

5.3 Capturing Expert Knowledge

Expert knowledge plays an integral role in KM, particularly in universities and such knowledge could remain unused if not tapped. Due to this, the respondents were asked to indicate whether there are means to capture experts' knowledge while in the university. 58.20% of the respondents agreed, 23.73% were neutral and 22.88% disagreed to the fact that the universities have means to capture experts' knowledge while in the university. The results further show that the private university was able to capture more expert knowledge (61.11%) than the professional university (55.56%) and public university (50.68%). According to Frost (2015), in capturing expert knowledge, it needs to be embodied in order to be disseminated to the universities as a whole. If expert knowledge can be recorded, it becomes part of the university's memory, safeguarding it as an intellectual asset and making it available for sharing across the wider university, with the potential benefit to innovation.

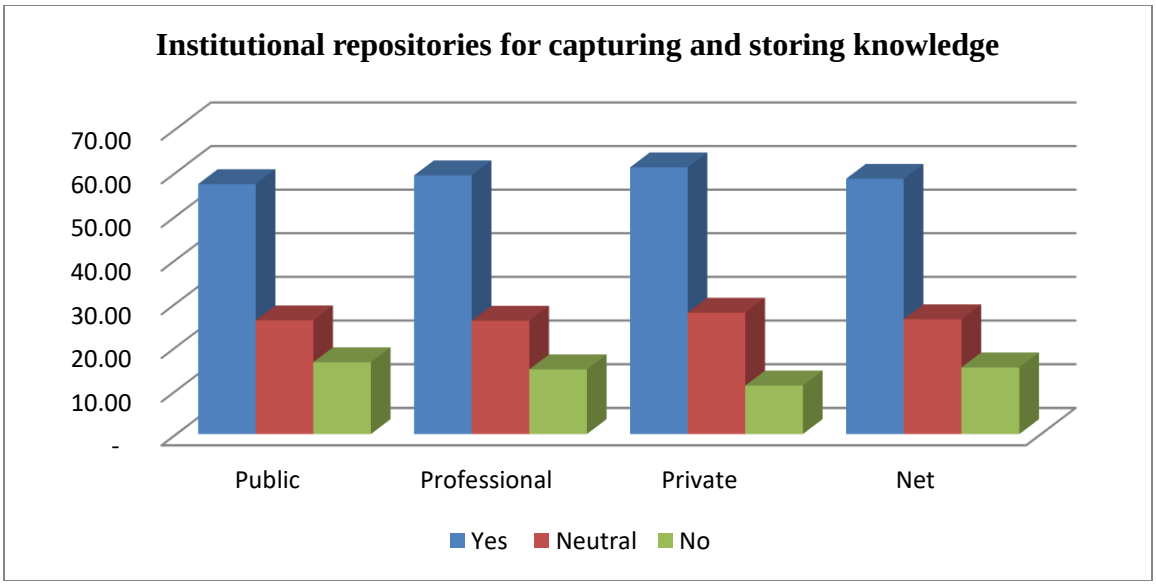
Similarly, the knowledge of experts is needed for the advantage of the universities. The respondents were asked to indicate if there are means to capture expertise knowledge when staffs' are exiting the university. The responses showed that 50% agreed, 27.97% were neutral, 22.03% disagreed that the universities have means to capture experts' knowledge when exiting the universities. The results also show that the professional university trailed (48.15%) the public university (49.32%) and the private university (55.56%).

5.4 Capturing Informal Knowledge

Universities are normally composed of series of informal knowledge processes, as the learning taking place would be inefficient if placed in a strictly formal knowledge process. The researcher asked the respondents to indicate whether there were adequate systems to capture the informal knowledge from the members of the universities: 45.76% agreed, 33.90% were neutral and 20.34% disagreed that there were adequate systems to capture the informal knowledge from the members of the universities. These results indicate that the respondents feel that informal knowledge was fairly captured (45.76%). The responses further showed that even though the respondents agreed the universities generally did not do well in capturing informal knowledge, at the individual university level, the private university was able to capture 50% informal knowledge while the public university and professional university were able to capture a below average informal knowledge of 45.21% and 44.44% respectively. This findings means that the universities does not only support formal knowledge, through faster learning and smaller chunks, but also somehow support the ever-increasing informal knowledge processes available.

5.5 Institutional Repositories

One aspect of KM is the implementation of repositories or systems to manage the local contents and memories of the organisation, rather than leaving it to chance (Frost, 2015). Thus, the researcher aimed to discover if the universities have implemented institutional repositories that facilitate the capturing and storage of knowledge. The responses are as follows: 58.47% agreed, 26.27% were neutral, 15.25% disagreed. These results showed that all the universities have implemented institutional repositories that capture and store knowledge.



In comparative terms, more respondents from the private university (61.11%) agreed that the university have implemented institutional repositories that capture and store knowledge than the professional university (59.26%) and the public university (57.53%). This outcome is positive as repositories are important for universities and assist to capture, store and manage intellectual assets. They also provide services to faculties, researchers and administrators who want to archive research findings, reports, book publications, creative materials, among others. Critical and relevant knowledge, as well as memories of organisations must be stored in a location and in a format which can be easily accessed by users (Morrissey, 2005:6).

In addition, the existence of repositories does not automatically ensure depositing of knowledge into them, therefore, the respondents were asked if knowledge created at the universities was captured and stored in a repository. The responses revealed that 50% agreed, 24.58% were neutral, 25.42% disagreed. Notably, from these results, the majority of the respondents from the private and professional universities (55.56% and 55.56% respectively) contributed their work into the institutional repository, since they were involved in knowledge creation through researching and publishing their work while the public university had 46.58%. This findings suports the assertion of Uden (2014) and Abiola (2015:8) that it has always been a practice, in almost all higher educational institutions, to store all relevant documents contributed by in-house resources in the knowledge repository or database.

5.6 Accessing Knowledge

The researcher was interested in establishing the accessibility of knowledge from the repositories of the universities, thus it was requested that the respondents indicate whether there is easy access to knowledge from the repositories. The responses showed that 50% agreed, 31.36% were neutral, 18.64% disagreed. Comparatively, at the private university, 66.67% agreed that most of the knowledge was more accessible than at the professional university (55.56%) and the public university (43.84%). As Collier (2004) expressed, while repositories, and their affiliated search and access tools, are useful for finding nuggets of corporate wisdom that have been codified, there is a great deal of corporate knowledge that remains uncodified. As such, it is also extremely useful to be able to access knowledge directly the expert.

5.7 Knowledge Sharing

To gain an idea of the extent of knowledge sharing, questions were directed at discov**e**ring whether knowledge was easily shared among staff across departments, to ensure that other members could learn from them, as well as at helping to avoid the replication of tasks. 44.92% of the respondents agreed, 29.66% were neutral, 25.42% disagreed. These results revealed that most of the knowledge at the universities was not easily accessible. Despite this, the private university (61.11%) was able to share more knowledge across departments than the professional university (44.44%) and public university (41.10%). According to Nonaka (2009), while the difficulty of sharing knowledge lies in transferring knowledge from one entity to another, it may prove profitable for organisations to acknowledge these difficulties, its practicality and to adopt new KM strategies accordingly.

5.8 General Comments on Knowledge Management Processes

Respondents were asked to provide further comments on KM processes (creation, capturing, sharing and storage of knowledge) at the universities. Below is a summary of the general comments outlined by the respondents.

- Staff should be involved in the decision-making processes of the universities.
- There is no formal mechanism for KM processes at the universities while it is practiced in real terms.
- Staff should be supported and motivated for knowledge creation, storage and sharing.
- The universities should increase funding for research and publication.
- Knowledge is sought from experts during crisis and difficult times.
- The experts' knowledge is fairly accessible and known.
- Knowledge is not retained when an employee exits, unless the individual makes the effort to share it before leaving.
- Knowledge is rarely documented and rarely passed on, hence, a new staff member comes in with a completely different strategy.
- Most shared knowledge is mainly for students.
- Knowledge is mostly from top to bottom and this hinders effective knowledge sharing.
- Awareness for sharing knowledge needs improvement.
- Sharing of knowledge is difficult for some staff, because they fear that if they share knowledge, their position may be threatened.
- Some menbers dont trust each other. As a result, they fail to freely collaborate and share knowledge among themselves.
- Theres the absence of openness, willingness and effective collaboration among some of the staff
- Difficultty access to technology resulted in deficiency in effective KM processes
- Repositories are available to gather all institutional information.
- The repositories are not easily accessible.

These responses show that despite the available systems and structures put in place by the universities to ensure effective KM processes, there are still some challenges or issolated problems that prevented the staff of the universities to either fully participate or contribute to the KM processes at the universities. While some of the problems identified are seen to be techinical

or related to technologies not readily available or usable, the others relates to human and organisational factors.

6. Conclusion

This study sought to assess the extent to which KM was practiced at the universities and the mechanisms and initiatives implemented to promote KM processes at the universities. The study established a high presence of KM processes (acquisition, creation, sharing and retention) at these universities, although it was higher at the private university than the professional and public universities. These KM processes improved efficiency, effectiveness, and decision-making capabilities. However, the absence of trust, openness and collaboration; difficult access to technology; and lack of support and mechanisms to promote informal discussions between staff and management of the universities negatively affected KM processes. This implied that, though the staff understood the concept of KM, they were unable to fully create, capture, store, access and share knowledge with others. The lack of support and mechanisms to promote informal discussions between staff and management of the universities negatively affected KM processes.

The research concludes that the universities need to implement the culture of trust, openness, willingness and collaboration for a more effective KM at the universities. The universities need to consider making changes and putting in mechanisms that facilitate and support informal interactions among staff and management. This may include: setting a formal period for lunch, offering common spaces and arranging social gatherings and events outside of the university environment. Allowing the staff to connect to each other, build trust and decrease the fear of making mistakes, will encourage them to share knowledge and to arrive at common solutions.

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